

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Daniel T. Colbert et al.

For: MACROSCOPICALLY MANIPULABLE  
NANOSCALE DEVICES MADE FROM  
NANOTUBE ASSEMBLIES

Atty Dkt: 11321-P011C1D6

§ Serial No: unassigned  
§ (division of application  
§ Serial No. 10/000,746)  
§  
§ Filed: concurrently herewith  
§  
§ Group Art Unit: 2881 (anticipated)  
§  
§ Prior Examiner: Jack I. Berman  
§ 703.308.4849  
§

U.S. Patent and Trademark Office  
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Date	<u>12/21/2001</u>
Signature	<u>Wanda Alexander Warren</u>
Wanda Alexander Warren Printed Name	

**PRELIMINARY AMENDMENT ACCOMPANYING REQUEST FOR FILING  
DIVISIONAL APPLICATION UNDER 37 C.F.R. § 1.53(b)**

Sir:

This paper accompanies a Request for Filing Divisional Application Under 37 C.F.R. § 1.53(b) and associated filing fee therefor ("the Request"). If the fee payment is missing or insufficient in amount, or if any other fees are determined to be due, the Assistant Commissioner, Commissioner, and/or the Director of the U.S. Patent & Trademark Office is/are hereby authorized to charge any such fees (or credit any overpayment) to Winstead Sechrest & Minick Deposit Account No. 23-2426, referencing matter number 11321-P011C1D6.

## **AMENDMENTS**

### **In the Title**

Please amend the title by replacing the present title with the following:

--METHOD OF FORMING COMPOSITE ARRAYS OF SINGLE-WALL CARBON  
NANOTUBES AND COMPOSITIONS THEREOF--

### **In the Abstract**

Please amend the abstract by replacing the present abstract with the following:

--This invention relates generally to forming arrays of single-wall carbon nanotubes (SWNT) and compositions thereof. In one embodiment, the present invention involves forming an array from more than one separately prepared molecular arrays or templates to prepare a composite structure. The multiple arrays can be the same or different with respect to the SWNT type or geometric arrangement in the array.--

### **In the Specification**

Please amend the specification as noted on page 4, paragraph 11 of the Request by inserting before the first line of the specification the following:

### **--RELATED APPLICATIONS**

This application is a division of co-pending prior application Serial No. 10/000,746, filed on November 30, 2001, which is a continuation of prior application Serial No. 09/242,040 filed on September 13, 1999, which is the 35 U.S.C. § 371 national application of International Application Number PCT/US97/13896 filed on August 8, 1997, which designated the United States, claiming priority to provisional U.S. patent application Serial Number 60/023,732 filed

on August 8, 1996. Each of the foregoing applications is commonly assigned to the assignee of the present invention and is hereby incorporated herein by reference in its entirety.

This application discloses subject matter related to the subject matter of U.S. patent application Serial Number 09/380,545, filed on September 3, 1999 in the name of Richard E. Smalley et al., entitled "Carbon Fibers Formed From Single-Wall Carbon Nanotubes," which application is commonly assigned to the assignee of the present invention and hereby incorporated herein by reference in its entirety.--

### **In the Claims**

Please amend the claims as follows.

Please cancel claims 1-83 without prejudice or disclaimer to the subject matter thereof.

Please add the following new claims 84-89:

84. (new) A method of forming a composite array of single-wall carbon nanotubes comprising:

- a) providing a plurality of single-wall carbon nanotubes;
- b) assembling the single-wall carbon nanotubes into at least two substantially two-dimensional arrays, wherein each of the two-dimensional arrays comprise the single-wall carbon nanotubes aggregated in substantially parallel orientation; and
- c) assembling the two-dimensional arrays into a single composite array.

85. (new) The method of claim 84 wherein the two-dimensional arrays comprise single-wall carbon nanotubes having a homogeneous characteristic selected from the group consisting of lengths, diameters, helicities and combinations thereof.

86. (new) The method of claim 84 wherein at least two of the two-dimensional arrays comprise single-wall carbon nanotubes having different homogeneous characteristics, and

wherein the homogeneous characteristics are selected from the group consisting of lengths, diameters, helicities and combinations thereof.

87. (new) A composite array of single-wall carbon nanotubes formed by the process comprising:

- a) providing a plurality of single-wall carbon nanotubes;
- b) assembling the single-wall carbon nanotubes into at least two substantially two-dimensional arrays, wherein each of the two-dimensional arrays comprise the single-wall carbon nanotubes aggregated in substantially parallel orientation; and
- c) assembling the two-dimensional arrays into a single composite array.

88. (new) The composite array of claim 87 wherein the two-dimensional arrays comprise single-wall carbon nanotubes having a homogeneous characteristic selected from the group consisting of lengths, diameters, helicities and combinations thereof.

89. (new) The composite array of claim 87 wherein at least two of the two-dimensional arrays comprise single-wall carbon nanotubes having different homogeneous characteristics, and wherein the homogeneous characteristics are selected from the group consisting of lengths, diameters, helicities and combinations thereof.

\* \* \* \* \*

**REMARKS**

1. *Status of the Application.* Claims 1-83 are cancelled herein without prejudice or disclaimer to the subject matter thereof. Claims 84-89 are added herein. No new matter is added by the addition of these claims.

\* \* \* \* \*

It is believed that each of the claims now pending in the present application recites elements neither taught nor suggested by the prior art. Further, it is believed that the application as a whole is in proper form and condition for allowance. If the Examiner believes that the application may be placed in even better condition for allowance, he or she is invited to contact the undersigned at the telephone number noted below. Alternatively, or in addition, if the Examiner believes that an Examiner interview would be beneficial, the Examiner is invited to note that the undersigned has ready access to the videoconferencing facilities of the South Central Intellectual Property Partnership at Rice University in Houston, Texas. The inventors and the undersigned would welcome the opportunity to use those facilities to clarify any issues deemed to remain unresolved.

Respectfully submitted,

Date:

21-DEC-2001

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